Golestan University of Medical Sciences

Journal of Research Development in Nursing and Midwifery
(J Res Dev Nurs Midw)
Online ISSN: 2588-3038

Relationships among self-care behaviors, anxiety, depression, and religious attitudes in patients with heart failure

Alireza Salar [1], Kourosh Zarea [2*], Nahid Kashisaz [3], Farzaneh Ahmadi [4], Samaneh Alinejad [5]

1. Community Nursing Research Center, Zahedan University of Medical Sciences, Zahedan, Iran
2. Nursing Care Research Center in Chronic Diseases, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran
3. Student Research Committee, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran
4. Department of Cardiology, School of Medicine, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran
5. School of Nursing, Institute of Health and Management, Sydney Campus, Australia

* Correspondence: Kourosh Zarea. Nursing Care Research Center in Chronic Diseases, School of Nursing and Midwifery, Ahvaz Jundishapur University of Medical Sciences, Ahvaz, Iran. Tel: +989166154943; Email: Zarea_k@ajums.ac.ir

Abstract

Background: Heart failure (HF) is a chronic condition requiring effective self-care to improve clinical outcomes and quality of life. Psychological factors such as anxiety and depression, as well as religious attitudes, may influence self-care behaviors, but evidence remains inconsistent. Thus, this study aimed to examine the relationships among self-care, religious attitudes, anxiety, and depression in patients with HF.

Methods: This cross-sectional study involved recruiting 114 HF patients through convenience sampling at two educational hospitals affiliated with Ahvaz Jundishapur University of Medical Sciences in Iran in 2023. Participants completed a demographic questionnaire, the European Self-Care Behavior Questionnaire (ESCBQ), the Hospital Anxiety and Depression Scale (HADS), and a Religious Attitude Questionnaire. Data were analyzed using SPSS version 22 with t-tests, one-way ANOVA, chi-square tests, Pearson correlation, and simple and multiple regression analyses.

Results: Participants had a mean age of 55.47±13.90 years, and hypertension was the most common comorbidity (15.8%). The mean self-care score was 38.92 ± 7.86 (Moderate level; higher scores indicate poorer self-care). Their anxiety (9.83±4.22) and depression (9.61±4.75) were at moderate levels, while their religious attitudes averaged 69.05 ± 10.08. Self-care behaviors were significantly negatively correlated with both anxiety and depression ($p<0.05$), but not with religious attitude. Multiple regression analysis revealed anxiety as the only independent predictor of self-care ($\beta=0.50$, $p<0.001$).

Conclusion: Anxiety appears to be an important factor in self-care among patients with HF, whereas depression and religious attitudes were not significant independent predictors. Interventions focusing on anxiety reduction and psychological support may prove effective in enhancing self-care behaviors and improving clinical outcomes in this population.

Article Type: Research Article

Article History

Received: 7 January 2026
Received in revised form: 1 February 2026
Accepted: 6 March 2026
Available online: 21 March 2026
DOI: 10.29252/jgbfnm.23.1.24

Keywords

Heart failure
Self-care
Depression
Anxiety
Attitude

Highlights

What is current knowledge?

- Self-care is a key component in managing HF and improving patient outcomes.
- Anxiety and depression are highly prevalent among HF patients and negatively affect self-care behaviors.
- Despite being under-addressed in clinical care, psychological factors are increasingly recognized as important determinants of disease management.
- Religious attitudes are believed to influence health behaviors, but evidence regarding their role in self-care among HF patients remains inconsistent and limited.

What is new here?

- This study demonstrates that anxiety is the strongest independent predictor of poor self-care in patients with HF.
- Although both anxiety and depression are correlated with self-care, only anxiety remains significant in multivariate analysis.
- No significant association was found between religious attitudes and self-care behaviors in this population.
- The findings highlight the need for targeted psychological (Especially anxiety-reduction) interventions to improve self-care in HF patients.

Introduction

Despite significant advances in the treatment and management of cardiovascular diseases, Heart Failure (HF) is still a major concern and problem, both medically and economically (1). According to the Global Burden of Disease (GBD) Study, the global prevalence of HF reached 55.50 million cases in 2021, marking more than a doubling since 1990, with recent trends indicating a potential stabilization or decline in age-standardized rates in high-income regions (2). An estimated 64.3 million people were living with HF worldwide in 2023. In developed countries, the prevalence of known HF is generally estimated at 1% to 2% of the general adult population (3).

A recent systematic analysis estimated the global economic burden of HF at US 284.17 billion across 179 countries. Of this amount,136.86 billion was attributed to direct healthcare costs and US $147.31 billion to indirect costs such as productivity loss, highlighting the substantial financial burden of HF worldwide (4). Cardiovascular diseases are a leading cause of death worldwide and impose a substantial burden on societies (5). In Iran, cardiovascular diseases account for more than one-third of all deaths (39%) and represent a major challenge for the healthcare system (6). HF is associated with many physical and psychological stressors, including pain, functional decline, loss of employment, sensory limitations, and fear of death. These stressors may lead to frustration, fatigue, panic, feelings of worthlessness, anxiety, and depressive symptoms (7).

Self-care is a decision-making process that involves choosing behaviors that include maintaining, managing, and trusting self-care (8). In patients with HF, self-care empowers the individual to cope with the disease and improves the quality of life by reducing the limitations caused by the disease (9). It leads to better management of symptoms such as pain, anxiety, and depression, a sense of well-being, and increased life expectancy (10). Therefore, self-care is one of the important factors for controlling and managing heart diseases and failure (11). Self-care is a decision-making process that includes self-care maintenance, self-care management, and confidence in self-care.

Among the variables that can play an important role in promoting self-care behaviors in patients with HF are psychological factors, particularly depression and anxiety, which are inversely associated with self-care engagement and adherence (12,13). Depression is a common and serious comorbidity in HF, affecting approximately one-third to nearly half of the patients worldwide (14). Depression is a significant barrier to effective self-care, reducing self-care maintenance, management, and confidence (15,16). Depressive symptoms are inversely associated with self-care, with higher depression linked to poorer adherence to medication, diet, daily weight monitoring, and timely help seeking.

Overall, depression and anxiety are two to three times more common in patients with cardiovascular disease than in the general population, with rates comparable to those seen in patients with diabetes and cancer (17). Recent studies have shown that moderate to severe depression is associated with a fivefold increase in mortality risk among patients with HF (18,19). Studies have shown that the overall level of anxiety in these patients is 4-5 times higher than in healthy individuals (19,20). Anxiety and depression are commonly associated with chronic illnesses such as HF. These conditions contribute to higher mortality, reduced quality of life, greater disability, and increased healthcare utilization and costs.

Although anxiety and depression are common in patients with HF, they often receive limited attention in clinical care, where the primary focus is usually on the disease itself rather than its psychological consequences (21). These disorders lead to intolerance to activity and cause the patient to lose his independence in performing normal life activities and become dependent on others in performing self-care activities (19).

In many communities, religious beliefs may shape attitudes toward self-care, health, and personal well-being.

Religious beliefs and attitudes may influence how individuals understand health-related behaviors (22).

Some studies suggest that religious beliefs may be associated with better psychological adjustment and coping during illness.

Religious involvement has also been associated with lower levels of anxiety, negative emotions, and depression (23).

Being under researched, the connections among self-care, religious beliefs, anxiety, and depression in HF patients are not entirely understood. It is also unknown how religious beliefs and psychological suffering affect self-care practices. As patient outcomes could significantly be improved by customized nursing interventions, nurses may prove effective in educating and supporting patients through preventive, treatment, and rehabilitation measures, especially when it comes to anxiety and depression. Therefore, the purpose of this study is to investigate the relationships among HF patients' self-care, anxiety, depression, and religious attitudes.

Methods

Study design and sampling

This cross-sectional analytical study aimed to explore the relationships among self-care behaviors as a dependent variable and anxiety, depression, and religious attitudes as independent variables among patients with HF. The study included 114 patients admitted to the cardiac intensive care units at Imam and Golestan educational hospitals in Ahvaz. Participants were selected based on predefined inclusion criteria, and the sample size was determined using the following formula:

$$n = \frac{\left(z_{1-\frac{\alpha}{2}} + z_{1-\beta}\right)^2}{\left(\frac{1}{2} ln \frac{1+r}{1-r}\right)^2} + 3 \quad z_{1-\frac{\alpha}{2}} = 1.96 \quad z_{1-\beta} = 1.28 \quad r = .31 \quad n = \frac{(1.96+1.28)^2}{\left(\frac{1}{2} ln \frac{1+.31}{1-.31}\right)^2} + 3 = 114$$

Inclusion criteria were willingness to participate and complete the questionnaire, a diagnosis of HF confirmed by a cardiologist for at least one year, and no neurological disorders such as stroke, transient ischemic attack, memory impairment, or dementia.

Data gathering and tools

The questionnaire comprised four sections: sociodemographic data, self-care behavior in HF patients based on a European questionnaire, the Hospital Anxiety and Depression Scale, and a religious attitudes questionnaire.

Demographic information collected included age, gender, marital status, education level, religion, occupation, illness duration, and presence of comorbidities such as hyperglycemia, hypertension, hypothyroidism, hyperthyroidism, nervous disorders, or other conditions. This comprehensive demographic data collection aimed to facilitate data analysis.

Scoring and interpretation method

The European Self-Care Behavior Questionnaire (ESCBQ) for HF patients, developed by Jarasma et al., is a comprehensive assessment tool including 12 questions evaluating self-care behaviors in affected individuals (24).

The total score of this five-point Likert scale questionnaire is calculated by adding the scores of all items, resulting in a possible range from 12 to 60. As scores between 12 and 28 indicate good self-care behavior, scores from 29 to 44 indicate average self-care behavior, and scores from 45 to 60 indicate poor self-care behavior. Lower scores reflect better self-care, while higher scores indicate poorer self-care behavior.

The questionnaire's reliability was acceptable, with a Cronbach's alpha of 0.68 in the original study and 0.71 in another study.

This demonstrates acceptable internal consistency, supporting its use for assessing self-care behaviors (24,25). In the current study, Cronbach's alpha for the ESCBQ was calculated as 0.75.

The Hospital Anxiety and Depression Scale (HADS) consist of 14 questions, with seven items for assessing anxiety and seven for evaluating depression, offering a balanced measure of both mental health conditions (26).

Each subscale has a possible score of 0 to 21. The cut-off points are 0 to 7 for healthy individuals, 8 to 10 for mild anxiety or depression, and 11 to 21 for severe anxiety or depression across both subscales. This questionnaire effectively assesses depression and anxiety levels in patients with heart diseases. To validate the Hospital Anxiety and Depression Questionnaire, its face, content, and concurrent validity were evaluated using external criteria. Its reliability was measured by Cronbach's alpha, which was 0.70 for the Depression subscale and 0.85 for the Anxiety subscale (9,27).

The religious attitude questionnaire was adapted to Shia Islam based on the Stark and Glock model, with spelling and grammatical revisions made to improve clarity and accuracy (28). This questionnaire assesses religiosity across four dimensions with 26 questions. Its reliability was evaluated using the halving method, resulting in Cronbach's alpha values of 0.75 and 0.78. All dimensions showed significant ($p<0.001$) reliability and validity, confirming the instrument's robustness (29).

Data analysis

The data were analyzed using SPSS version 22. Descriptive statistics were used to summarize the quantitative data, and frequency and percentage were used to describe the qualitative variables. Inferential analysis included ANOVA, independent t-tests, chi-square tests, Pearson correlation tests, and regression analyses. The significance level was set at 0.05 for all the tests.

Results

This study included 114 patients with a mean age of 55.47±13.90 years. All the participants identified as Muslims and Shia. Most participants were male (58, 50.9%) and married (91, 79.8%). The most common education level was diploma (35, 30.7%), and the most frequently reported occupation was housewife (45, 39.5%) (Table 1).

Hypertension was the most prevalent underlying condition, affecting 18 individuals (15.8%), followed by diabetes with hypertension, affecting 16 individuals (14%) (Table 2).

Table 1. Frequency and percentage of demographic information of patients with HF (n=114)

Variable	Classification	Frequency (Percentage)
Gender	Man	58 (50.9)
	Woman	56 (49.1)
Marital status	Single	11 (9.6)
	Married	91 (79.8)
	Widow	10 (8.8)
	Separated	2 (1.8)
Education	Illiterate	25 (21.9)
	Under the diploma	34 (29.8)
	Diploma	35 (30.7)
	Associate	9 (7.9)
	Bachelor	10 (8.8)
	Master	1 (0.9)
Job status	Jobless	11 (9.6)
	Self-employed	19 (16.7)
	Housewife	45 (39.5)
	The employee	23 (20.2)
	Retired	11 (14.0)
Total	Total	114 (100)

Table 2. Frequency and percent of underlying diseases of patients with HF (n=114)

Underlying comorbid diseases	Frequency (Percent)
Diabetes	6 (5.3)
Obesity	6 (5.3)
Hypertension	18 (15.8)
Hypothyroidism	2 (1.8)
Thyroid	1 (0.9)
Diabetes, Obesity	7 (6.1)
Diabetes, Obesity, Thyroid	1 (0.9)
Diabetes, Obesity, Hypertension, Hypothyroidism	4 (3.5)
Diabetes, Obesity, Hypertension, Neurology, and Psychiatry	2 (1.8)
Diabetes, Obesity, and Hypertension	12 (10.5)
Diabetes, Hypertension	16 (14.0)
Obesity, Hypertension	9 (7.9)
Diabetes, Obesity, Neurology, and Psychiatry	4 (3.5)
Obesity, Hypertension, and Hypothyroidism	1 (0.9)
Diabetes, Hypothyroidism	1 (0.9)
Obesity, Hypothyroidism	1 (0.9)
Diabetes, Obesity, and hypothyroidism	2 (1.8)
Diabetes, Obesity, and Hypertension	2 (1.8)
Cancer	1 (0.9)
None	18 (15.8)
Total	114 (100)

The results showed that the mean self-care score was 38.92±7.86, indicating a moderate level. The mean scores for anxiety, depression, and religious attitudes were 9.83±4.22, 9.61±4.75, and 69.05±10.08, respectively, reflecting moderate levels.

Pearson correlation analyses were conducted to examine the relationships among self-care, anxiety, depression, and religious attitudes. The results indicated a strong positive correlation between anxiety and depression ($r = 0.646$, $p < 0.001$). Anxiety ($r = 0.489$, $p < 0.001$) and depression ($r = 0.393$, $p < 0.001$) were positively correlated with self-care scores, indicating that higher anxiety and depression were associated with lower self-care. Religious attitudes were not significantly correlated with anxiety ($r = -0.064$, $p = 0.499$), depression ($r = -0.059$, $p = 0.533$), or self-care ($r = -0.014$, $p = 0.884$) (Table 3).

Table 3. Pearson correlations among anxiety, depression, religious attitudes, and self-care (n=114)

Variables	1	2	3	4
1. Anxiety	0.489**	-0.064	0.646**	—
2. Depression	0.393**	-0.059	—	0.646**
3. Religious attitude	-0.014	—	-0.059	-0.064
4.Self-care (Higher=Worse)	—	-0.014	0.393**	0.489**

** $p < 0.001$. Self-care scores were reverse-coded, with higher scores indicating lower self-care

Simple and multiple regression analyses were conducted to predict self-care based on anxiety, depression, and religious attitudes.

Multiple linear regression (Anxiety, Depression, Religious attitude → Self-care)

A multiple linear regression was conducted to examine the extent to which anxiety, depression, and religious attitudes predicted self-care. The overall model showed that only anxiety was a significant predictor of self-care ($\beta = 0.500$, $p < 0.001$). Depression ($\beta = 0.082$, $p = 0.447$) and religious attitudes ($\beta = 0.038$, $p = 0.651$) were not significant predictors.

The regression equation was as follows: (Self-care = 28.478 + 0.889 × Anxiety).

This indicates that higher anxiety scores are associated with lower self-care. The positive B coefficient indicates a direct relationship between anxiety and self-care scores, given the reverse coding of self-care (Table 4).

Table 4. Multiple linear regression predicting self-care from anxiety, depression, and religious attitudes

Predictor	B	Std. Error	β	t	p
Constant	28.478	4.949	—	5.754	0.000
Anxiety	0.889	0.198	0.500	4.482	0.000
Depression	0.128	0.168	0.082	0.763	0.447
Religious attitudes	0.028	0.061	0.038	0.454	0.651

Note. Dependent variable = Self-care (Higher score = lower self-care). Only anxiety was a significant predictor ($p < 0.05$).

Simple linear regression (Anxiety → Self-care)

Simple linear regression showed a significant relationship between anxiety and self-care ($p<0.005$). Anxiety, being the only independent variable that significantly predicted self-care in both multiple and simple regression models, alone explained approximately 29% of the variance in self-care. Depression and religious attitudes were not significant predictors when considered together with anxiety. Positive B coefficients indicated a direct relationship: higher anxiety predicted lower self-care (Due to reverse coding of self-care scores). The multiple regression model explained part of the variance in self-care while controlling for other predictors, whereas the simple regression model showed the isolated effect of anxiety (Tables 5 and 6).

The result of the regression equation was: (Self-care = 28.939 + 0.994 × Anxiety)

Table 5. Simple linear regression predicting self-care from anxiety

Predictor	B	Std. Error	β	t	p
Constant	28.939	1.584	—	18.267	0.000
Anxiety	0.994	0.148	0.539	6.733	0.000

Table 6. Statistics for Simple Linear Model

Model Type	R^2	F	df1	df2	p	Constant (B0)	b1 (Anxiety)
Linear	0.290	45.340	1	111	0.000	-1.422	0.292

Discussion

This study examined the psychological determinants of self-care in patients with HF, focusing on anxiety, depression, and religious attitudes. The findings revealed moderate levels of self-care, anxiety, and depression, while religious attitudes were not significantly related to self-care. Although both anxiety and depression were correlated with poorer self-care in bivariate analyses, only anxiety remained an independent predictor in multivariate regression analysis. These findings provide insights into how emotional distress influences self-management behaviors in patients with HF.

The moderate self-care score observed in this study is consistent with recent international research, indicating that many patients with HF do not fully engage in recommended self-care practices, despite the established benefits of such behaviors in reducing morbidity and mortality. A mixed-methods systematic review identified multiple determinants of self-care, including psychosocial, sociodemographic, and cultural factors, underscoring the complexity of self-management behaviors in HF populations and the persistence of suboptimal self-care across settings (30). Bagheri-Saweh et al. reported that self-care behaviors were mostly moderate, and education, living conditions, and disease-related education were significantly associated with self-care. As a result, the level of self-care behaviors in patients with HF was not satisfactory, so training and strengthening self-care behaviors in these patients are necessary (31). In Zeighami Mohammadi et al.'s study, the results showed that adherence to self-care behaviors was moderate in 84% and poor in 10%. Overall, adherence to self-care behaviors was inadequate in patients with HF. The education and follow-up of self-care behaviors should be done with a focus on specific problems of old age, social support, simplification of medication and diet, and attention to other chronic diseases (32). It is essential to emphasize self-care behaviors among heart patients to improve health outcomes and prevent complications effectively.

Based on the findings of the present study, depression and anxiety were moderate, which is in line with the results of the studies by Aghakhani et al. (9), Kutcher et al. (13), Chang et al. (33), and Lee et al. (11). These findings suggest that self-care interventions should also address anxiety and depression in patients with HF.

In this study, self-care showed no significant relationship with religious attitudes. This contrasts with Ghanbari and Bahadori Monfared's findings, which emphasize religion's influence on self-care (22). Although spirituality can influence coping and well-being, general religiosity does not consistently predict self-care in patients with HF. Its effect may depend on spiritual health, coping style, and cultural context (34-36). This difference could be due to cultural variations and differing perspectives within populations. However, additional studies are required to investigate these aspects.

Although depression correlated with self-care in bivariate analyses, it did not remain significant in the multivariate model, suggesting its effect may be mediated through anxiety, self-efficacy, or health literacy (13,37). Previous research indicates that depressive symptoms reduce self-care confidence and motivation, indirectly impacting adherence to self-care. It is crucial to focus on enhancing self-care behaviors by alleviating depressive symptoms in individuals with HF (33,37,38). Therefore, managing depression in patients with HF should focus not only on symptom reduction but also on enhancing self-efficacy, patient education, and psychosocial support.

The findings of this study showed that anxiety was a significant independent predictor of self-care behaviors. Integrative evidence demonstrates an inverse association between anxiety and self-care, where higher anxiety is linked to poorer adherence to self-care routines (12). This finding is consistent with the study of Aghakhani et al., which revealed that implementing a self-care training and support program decreases anxiety and depression in patients with myocardial infarction (9). Anxiety can interfere with the cognitive functions needed for self-care activities, such as recognizing symptoms, following medication schedules, and making lifestyle changes, highlighting the importance of psychological screening and focused interventions. Therefore, nursing managers in healthcare settings can implement this strategy as an effective method for reducing anxiety and depression in patients with diabetes.

Overall, this study found that psychological discomfort has a major impact on HF patients' ability to care for themselves. Poorer self-care was linked to both anxiety and depression, but anxiety was the sole independent predictor, indicating that it has a more direct and disruptive impact on patients' ability to do important self-management tasks. Furthermore, there was no significant correlation between self-care and religious attitudes, implying that broad religious beliefs may not necessarily transfer into beneficial health-related behaviors.

Limitations

The cross-sectional design of this study limits its ability to infer causality. Moreover, the sample was culturally specific. Because convenience sampling was used and all participants were Muslim and Shi'a, the findings may not be generalizable to other contexts. Additionally, since the measures were self-reported, they may be subject to bias, and the assessment of religious attitudes did not capture broader spiritual dimensions.

Conclusion

This study identified psychological distress particularly anxiety as a central determinant of self-care behavior in individuals with HF. Although depressive symptoms were associated with self-care engagement, anxiety emerged as the strongest independent predictor, indicating that it may exert a more immediate and functionally disruptive effect on patients' ability to perform effective self-management. These findings reinforce the view of self-care not merely as a behavioral routine, but as a cognitively and emotionally regulated process that is highly sensitive to psychological burden. The lack of a substantial relationship between religious attitudes and self-care suggests that general religiosity alone may not be enough to impact everyday health practices in chronic illness settings. Unlike broad attitudinal categories, dynamic psychological states tend to have a more direct impact on patients' self-management capacities.

Overall, our findings showed that improving HF outcomes necessitates a shift away from traditional education-focused methods and toward integrated care approaches comprehensively addressing emotional regulation and anxiety management. Targeting psychological fragility could be a significant leverage point for increasing sustained self-care involvement and enhancing long-term clinical outcomes in HF patients.

Longitudinal studies are needed to establish the causal relationships between psychological factors and self-care. Investigating multidimensional spirituality and its potential moderating or mediating effects may provide a more complete picture of the role of religion and spirituality in chronic disease management. Furthermore, studying the relationships among social support, psychological well-being, and self-care habits may help develop comprehensive treatment models.

Acknowledgement

This study was derived from a master's thesis in the field of Nursing, specializing in Psychiatric Nursing, at the Faculty of Nursing and Midwifery. The research was conducted under the supervision of the Nursing Research Center in Chronic Disease.

The researchers would like to express their gratitude to the Vice Chancellor for Research at the School of Nursing and Midwifery of Ahvaz Jundishapur University and to the units participating in this study.

Funding Sources

All expenses of this research were provided by Ahvaz Jundishapur University of Medical Sciences (AJUMS), Ahvaz, Iran. The funder had no role in the design, data collection, data analysis, data interpretation, or writing of the manuscript.

Ethical Statement

The study protocol was approved by the Research Deputy of the center (Approval Code: NCRCCD-9818) and the Ethics Committee of Ahvaz Jundishapur University of Medical Sciences (Ethics Code: IR.AJUMS.REC.1398.342). This study considers ethical issues and clearly explains the research objectives to participants, emphasizing confidentiality, voluntary participation, and the right to withdraw. Informed written consent was obtained from the participants, along with demographic questionnaires. These steps ensure ethical compliance and protect the participants' rights throughout the research process, aligning with institutional and ethical standards for human subject research.

Conflicts of Interest

The authors declare that they do not have any conflict of interest.

Author Contributions

NK, KZ, FA, AS, and SA were involved in designing this research. NK collected the data. AS analyzed the data. KZ and NK were involved in data interpretation. KZ was responsible for writing and finalizing the manuscript. All authors have read and approved the manuscript.

Data Availability Statement

Data will be available upon request from the corresponding author.

Use of Artificial Intelligence

No AI tools/services were used during the preparation of this work.

References

1. Baradaranfard F, Babaee S, Boroumand S, Mosleh S, Jafari F, Binaee N. The Relationship Between Quality of Life and Cardiovascular Self-Efficacy in Patients with Heart Failure: A Descriptive Correlation Study. Jundishapur J Chronic Dis Care. 2018;7(4):e68431. [View at Publisher] [DOI] [Google Scholar]
2. Ran J, Zhou P, Wang J, Zhao X , Huang Y, Zhou Q , et al. Global, regional, and national burden of heart failure and its underlying causes, 1990-2021: results from the global burden of disease study 2021. Biomark Res. 2025;13(1):16. [View at Publisher] [DOI] [PMID] [Google Scholar]
3. Shahim B, Kapelios CJ, Savarese G, Lund LH. Global Public Health Burden of Heart Failure: An Updated Review. Card Fail Rev. 2023;9:e11. [View at Publisher] [DOI] [PMID] [Google Scholar]
4. Darvish M, Shakoor A, Feyz L, Schaap J , van Mieghem NM , de Boer RA ,et al. Heart failure: assessment of the global economic burden. Eur Heart J. 2025;46(31):3069-78. [View at Publisher] [DOI] [PMID] [Google Scholar]
5. WHO. Cardiovascular diseases (CVDs). World Health Organization. 2025. [View at Publisher]
6. Janjani M, Ghadampour E, Hojati M. The Role of Self-care, Resilience and Despair on depression in the elderly with Heart Diseases. Aging Psychol. 2018;3(3):181-8. [View at Publisher] [Google Scholar]
7. Harris KM, Jacoby DL, Lampert R, Soucier RJ, Burg MM. Psychological stress in heart failure: a potentially actionable disease modifier. Heart Fail Rev. 2021;26(3):561-75. [View at Publisher] [DOI] [PMID] [Google Scholar]
8. Hoch CR, George G, Matura LA. The Relationship Between Fatigue and Self-care in Adults With Heart Failure: A Scoping Review. J Cardiovasc Nurs.2026;41(3):182-93. [View at Publisher] [DOI] [PMID] [Google Scholar]
9. Aghakhani N, Sanaie K, Baghaei R, Khademvatan K. the impact of educational- supportive self-care package on anxiety, depression and stress in myocardial infarction patients hospitalized in shahid gholipour hospital, boukan, iran, 2016. Nurs Midwifery J. 2017;15(4):281-91. [View at Publisher] [Google Scholar]
10. Riegel B, Dickson VV, Faulkner KM. The Situation-Specific Theory of Heart Failure Self-Care: Revised and Updated. J Cardiovasc Nurs. 2016;31(3):226-35. [View at Publisher] [DOI] [PMID] [Google Scholar]
11. Lee KS, Lennie TA, Yoon JY, Wu JR, Moser DK. Living Arrangements Modify the Relationship Between Depressive Symptoms and Self-care in Patients With Heart Failure. J Cardiovasc Nurs. 2017;32(2):171.-9. [View at Publisher] [DOI] [PMID] [Google Scholar]
12. Wang Z, Tocchi C, Chyun D, Kim K, Cong X, Starkweather A. The association between psychological factors and self-care in patients with heart failure: an integrative review. Eur J Cardiovasc Nurs. 2023;22(6):553-61. [View at Publisher] [DOI] [PMID] [Google Scholar]
13. Kutcher AM, Byon H Do, Esquivel JH. Depression, Anxiety, and Resilience. J Cardiovasc Nurs. 2024;39(3):E72-9. [View at Publisher] [DOI] [PMID] [Google Scholar]
14. Moradi M, Doostkami M, Behnamfar N, Rafiemanesh H, Behzadmehr R. Global Prevalence of Depression among Heart Failure Patients: A Systematic Review and Meta-Analysis. Curr Probl Cardiol. 2022;47(6):100848. [View at Publisher] [DOI] [PMID] [Google Scholar]
15. Bekele F, Tafese L, Demsash AW, Tesfaye H, Labata BG, Fekadu G. Adherence to self-care practices and associated factors among heart failure patients in Ethiopia: A systematic review and meta-analysis. PLoS One. 2023;18(8):e0288824. [View at Publisher] [DOI] [PMID] [Google Scholar]
16. Zeighami Mohammadi S, Farmani P, Danesh E. Correlation Between Type D Personality and Medication Adherence in Patients with Systolic Heart Failure. J Res Dev Nurs Midwifery. 2017;14(2):57-64. [View at Publisher] [DOI] [Google Scholar]
17. Celano CM, Huffman JC. Depression and cardiac disease: a review. Cardiol Rev. 2011;19(3):130-42. [View at Publisher] [DOI] [PMID] [Google Scholar]
18. Rajan S, McKee M, Rangarajan S, et al. Association of Symptoms of Depression with Cardiovascular Disease and Mortality in Low-, Middle-, and High-Income Countries. JAMA Psychiatry. 2020;77(10):1052-63 . [View at Publisher] [DOI] [PMID] [Google Scholar]
19. Taghadosi M, Rohollah F, Aghajani M, Raygan F. Effect of cognitive therapy on mental health in patients with heart failure. Feyz. J Kashan Univ Med Sci. 2014;18(1):52-9. [View at Publisher] [Google Scholar]
20. AbuRuz ME. Anxiety and depression predicted quality of life among patients with heart failure. J Multidiscip Healthc. 2018;11:367-73. [View at Publisher] [DOI] [PMID] [Google Scholar]
21. Ebadi A, Moradian ST, Feyzi F, Asiabi M. Comparison of hospital anxiety and depression among patients with coronary artery disease based on proposed treatment. Iran J Crit CARE Nurs. 2011;4(2):97-102. [View at Publisher] [Google Scholar]
22. Ghanbari S, Bahadorimonfared A. Self-care from the Perspective of Islam. gums-hnmj. 2020;6(2):1-6. [View at Publisher] [Google Scholar]
23. Nourisaeed A, Salari A, Nourisaeed A, Rouhi Balasi L, Moaddab F, Akbari B. Comparison of religious attitudes in patients with coronary artery disease and healthy people. Iran J Nurs Res. 2015;10(3):18-25.l [View at Publisher]
24. Jaarsma T, Cameron J, Riegel B, Stromberg A. Factors Related to Self-Care in Heart Failure Patients According to the Middle-Range Theory of Self-Care of Chronic Illness: a Literature Update. Curr Heart Fail Rep. 2017;14(2):71-7. [View at Publisher] [DOI] [PMID] [Google Scholar]
25. Shojaei F, Asemi S, Najaf Yarandi A, Hosseini F. Self- care behaviors in patients with heart failure. payeshj. 2009;8(4):361-9. [Google Scholar]
26. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatr Scand. 1983;67(6):361-70. [View at Publisher] [DOI] [Google Scholar]
27. Zarea K, Maghsoudi S, Dashtebozorgi B, Hghighizadeh MH, Javadi M. The Impact of Peplau's Therapeutic Communication Model on Anxiety and Depression in Patients Candidate for Coronary Artery Bypass. Clin Pract Epidemiol Ment Heal. 2014;10(1):159-65. [View at Publisher] [DOI] [PMID] [Google Scholar]
28. Stark R, Glock CY. American Piety: The Nature of Religious Commitment. Vol 29. University of California Press; 1968. [View at Publisher] [DOI] [Google Scholar]
29. Serajzadeh SH, Pouyafar MR. Religion and social order: A study of the relationship between religiosity and feelings of anomie and deviance. Social Problems of Iran Year. 2009;16(63):71-05. [In Persian] [View at Publisher]
30. Tian F, Chen S, Lan X, Zhang R x, Zhu C Y, Chen Y. Factors influencing self-care behaviours in patients with heart failure: A mixed-methods systematic review. Hear Lung. 2026;75:304-12. [View at Publisher] [DOI] [PMID] [Google Scholar]
31. Bagheri-Saweh MI, Lotfi A, Salawati Ghasemi S. Self-care behaviors and related factors in chronic heart failure patients. Int J Biomed Public Heal. 2018;1(1):42-7. [DOI] [Google Scholar]

32. Zeighami Mohamadi S, Alhani F, Shakoor M, Farmani P, Fahidi F, Mohseni B,et al. Self-care behaviors in patients with systolic heart failure. J Nurs Midwifery Sci. 2015;2(1):46-54. [View at Publisher] [Google Scholar]
33. Chang LY, Wu SY, Chiang CE, Tsai PS. Depression and self-care maintenance in patients with heart failure: A moderated mediation model of self-care confidence and resilience. Eur J Cardiovasc Nurs. 2017;16(5):435-44. [View at Publisher] [DOI] [PMID] [Google Scholar]
34. Bagheri saweh MI, Ashketorab T. The Study of Self-care behaviors and its related factors in patients with congestive heart failure hospitalized in cardiology wards of Tohid Hospital in Sanandaj city. Sci J Nursing, Midwifery Paramed Fac. 2016;1(3):1-11. [View at Publisher] [DOI] [Google Scholar]
35. Radwańska E, Szwamel K, Lepsy E, Żurek A, Jerzy Gurowiec P, Krok D, et al. Relationship between the level of spirituality and quality of life or psychological well-being in elderly patients hospitalised for heart failure. Med Stud. 2024;40(2):124-42. [View at Publisher] [DOI] [Google Scholar]
36. Amini M, Gheibizadeh M, Kalboland MM, Sharhani A. Investigating the predictive role of spiritual health, social support, and quality of life in self-care behaviors among heart failure patients. J Educ Health Promot. 2023;12(1):438. [View at Publisher] [DOI] [PMID] [Google Scholar]
37. Carrillo A, Belnap BH, Rothenberger SD, Feldman R, Rollman BL, Celano CM. Psychosocial predictors of health behavior adherence in heart-failure patients with comorbid depression: a secondary analysis of the Hopeful Heart trial. BMC Psychol. 2024;12(1):328. [View at Publisher] [DOI] [PMID] [Google Scholar]
38. Freedland KE, Skala JA, Steinmeyer BC, Carney RM, Rich MW. Effects of Depression on Heart Failure Self-Care. J Card Fail. 2021;27(5):522-32. [View at Publisher] [DOI] [PMID] [Google Scholar]

Cite this article as:
Salar A, Zarea K, Kashisaz N, Ahmadi F, Alinejad S. Relationships among self-care behaviors, anxiety, depression, and religious attitudes in patients with heart failure. *J Res Dev Nurs Midw*. 2026;23(1):24-9. http://dx.doi.org/10.29252/jgbfnm.23.1.24